DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: BEAVER PON	I D	Lake Area (ha):	8.01
Town: HAF	RRISVILLE	Maximum depth (m):	3.3
County: Che	shire	Mean depth (m):	1.6
River Basin: Men	rimack	Volume (m³):	126000
Latitude: 42°		Relative depth:	1.0
Longitude: 72°	00'48" W	Shore configuration:	
Elevation (ft):	955	Areal water load (m/yr): 27.82
Shore length (m)	: 800	Flushing rate (yr^{-1}) :	17.70
Watershed area	(ha): 418.9	P retention coeff.:	0.44
% watershed pond	led: 2.3	Lake type:	natural

BIOLOGICAL:	13 February 1997	8 August 1996
DOM. PHYTOPLANKTON (% TOTAL) #1	SPARSE - MOSTLY	RHIZOSOLENIA 20%
#2	TINY PENNATE DIATOMS	MALLOMONAS 15%
#3		PERIDINIUM 15%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		11.58
DOM. ZOOPLANKTON (% TOTAL) #1	KELLICOTTIA 32%	KELLICOTTIA 26%
#2	CHROMOGASTER? 32%	CONOCHILUS 18%
#3	KERATELLA 19%	RHIZOPOD PROTOZOAN 18%
ROTIFERS/LITER	57	422
MICROCRUSTACEA/LITER	11	155
ZOOPLANKTON ABUNDANCE (#/L)	68	727
VASCULAR PLANT ABUNDANCE		Common/Abun
SECCHI DISK TRANSPARENCY (m)		1.5
BOTTOM DISSOLVED OXYGEN (mg/L)	3.5	0.2
BACTERIA (E. coli, #/100 ml) #1		< 1
#2		
#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : 34

: 34000

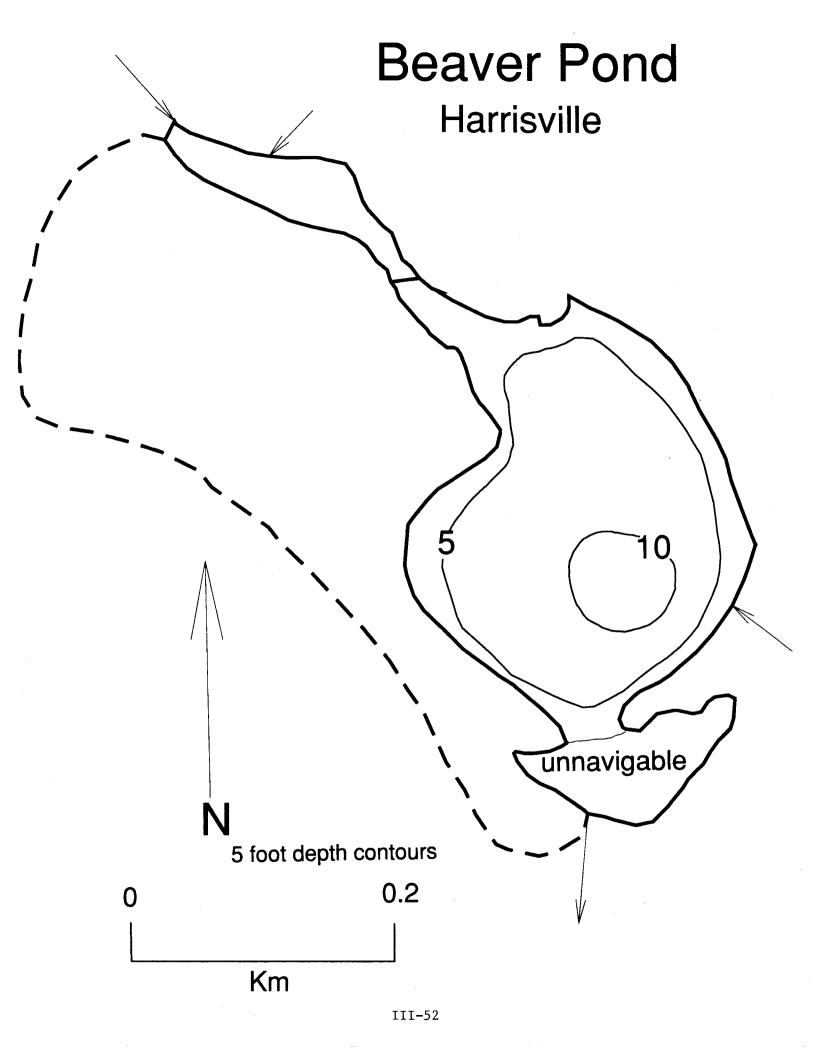
EMICAL:	Lake: BEAVER POND Town: HARRISVILLE			
	13 Febru	uary 1997	8 August 1996	
DEPTH (m)	1.5		1.5	
pH (units)	5.3		5.7	
A.N.C. (Alkalinity)	2.1		3.9	
NITRATE NITROGEN	0.05		< 0.05	
TOTAL KJELDAHL NITROGEN	0.30		0.80	
TOTAL PHOSPHORUS	0.016		0.028	
CONDUCTIVITY (µmhos/cm)	78.9		52.6	
APPARENT COLOR (cpu)	38		150	
MAGNESIUM			0.38	
CALCIUM			2.1	
SODIUM			6.8	
POTASSIUM			< 0.40	
CHLORIDE	17		9	
SULFATE	5		2	
TN : TP	22		29	
CALCITE SATURATION INDEX			4.7	

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1996

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	4	2	10	Eutro.

- COMMENTS: This is a natural, shallow weedy pond with extensive wetlands along its inlet area. It is darkly tea-colored, moderately acidic, and eutrophic.
 - There was no dissolved oxygen below one meter and in only 3 meters the 2. temperature dropped 12° C.
 - No public access exists. Access to open water was achieved by canoeing through 3. dense plant beds.
 - 4. The zooplankton were abundant, indicating the high primary productivity was passing into higher trophic levels.



FIELD DATA SHEET

LAKE: BEAVER POND TOWN: HARRISVILLE WEATHER: SUNNY, HOT, HAZY DATE: 08/08/96

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	26.5	7.0	87 %
1.0	22.8	3.1	36 %
2.0	18.4	0.2	2 %
3.0	14.4	0.3	2 %

1.5 **COMMENTS:** SECCHI DISK (m):

BOTTOM DEPTH (m): 3.3

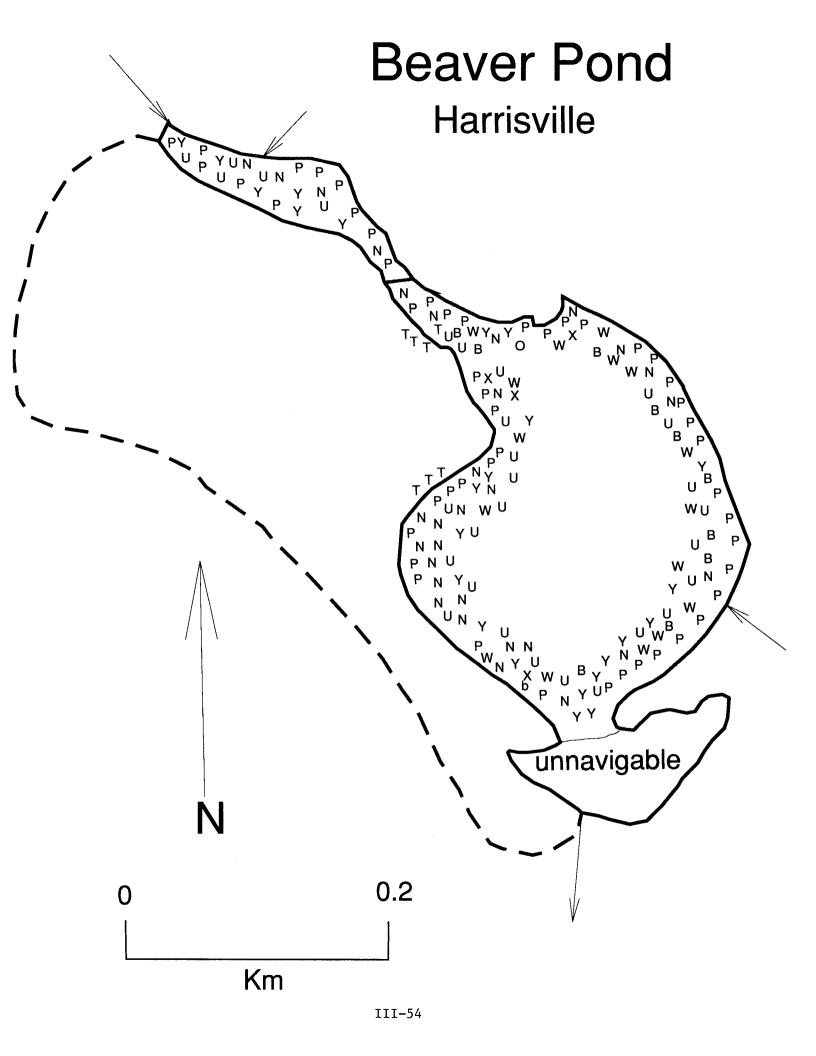
> TIME: 1130

There was a large (>12° C) temperature difference from

top to bottom, but it was not

stratified into thermal layers.

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAKE: BEAVER POND		TOWN: HARRISVILLE	DATE: 08/08/96	
Vov	PLANT	NAME		
Key	GENERIC	COMMON	ABUNDANCE	
b	Scirpus	Bulrush	Sparse	
Т	Typha	Cattail	Scattered	
Y	Nuphar	Yellow water lily	Common	
N	Nymphaea	White water lily	Common	
P	Pontederia cordata	Pickerelweed	Common	
U	Utricularia	Bladderwort	Common	
W	Potamogeton	Pondweed	Common	
Х		Sterile thread-like leaf	Sparse	
В	Brasenia schreberi	Water shield	Scattered	
		·		

OVERALL ABUNDANCE: Common/Abun

GENERAL OBSERVATIONS:

1. Plants were abundant to very abundant in the outlet cove (unnavigable due to dense plant growth) and in the inlet arm. The pond was also surrounded by wetlands. Plants were common in the open pond area, for an overall rating of common/abundant.